

July 2015

Trego County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 10 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Trego County economy.¹ These 10 sectors have a total direct output of approximately \$83 million and support 367.2 jobs in Trego County. Running the model for all 10 sectors simultaneously produces the following results:

Agriculture Contribution in Trego County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	367.2	17%	\$21,442,563	17%	\$83,280,759	66%
Indirect Effect	200.0	9%	\$11,513,338	9%	\$18,411,078	15%
Induced Effect	50.3	2%	\$3,565,752	3%	\$6,357,917	5%
Total Effect	617.5	29%	\$36,521,652	29%	\$108,049,755	86%

As shown in the above table, agriculture, food, and food processing supports 617.5 jobs, or 29% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$108 million, roughly 86% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 10 agriculture, food, and food processing sectors is approximately \$37 million, or 29% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 29% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

¹ Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

² Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

³ Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

⁴ GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

⁵ Output = Intermediate Inputs + Value Added

In the top ten by employment, Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming is the top employer in the agriculture industry with 146.4 employees. This table also shows the amount of jobs that are created by the agriculture industry in Trego County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	146.4	\$32,926,790
Support activities for agriculture and forestry	132.3	\$7,613,630
Grain farming	118.2	\$35,923,611
All other crop farming.....	64.8	\$7,131,861
Wholesale trade.....	21.1	\$4,077,277
Dairy cattle and milk production.....	18.7	\$3,030,254
Veterinary services	13.3	\$1,022,109
Truck transportation.....	12.2	\$1,530,075
Real estate.....	8.1	\$1,303,390
Limited-service restaurants	7.0	\$350,924

The Grain farming industry directly contributes approximately \$36 million to Trego County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Grain farming	118.2	\$35,923,611
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	146.4	\$32,926,790
Support activities for agriculture and forestry	132.3	\$7,613,630
All other crop farming.....	64.8	\$7,131,861
Wholesale trade.....	21.1	\$4,077,277
Dairy cattle and milk production.....	18.7	\$3,030,254
Farm machinery and equipment manufacturing.....	3.1	\$1,818,774
Owner-occupied dwellings	0.0	\$1,717,597
Truck transportation.....	12.2	\$1,530,075
Other local government enterprises.....	4.9	\$1,364,780

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Trego County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.